

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US01/08646

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/14, 17/10  
US CL : 708/404, 321

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 708/403-404, 409, 321

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,671,168 A (LIU et al) 23 September 1997, Figs. 3-4, col. 13, line 15-59.	1-6
A	US 4,100,604 A (PERREAULT) 11 July 1978, see entire document.	1
A,P	US 6,169,723 B1 (FERTNER et al) 02 January 2001, see entire document.	1

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRACED FAST FOURIER TRANSFORM APPARATUS AND METHOD

(57) Abstract: A Fast Fourier Transform (FFT) arrangement for use in those situations in which not all of the outputs are desired is controlled in such a fashion that at least those multiplications (and possibly those additions) are not performed which do not contribute toward the desired outputs. The technique is usable in those situations in which the desired output signals are noncontiguous, or are in noncontiguous bins. The technique includes signal preprocessing in which the indices are adjusted so that the index for a particular stage points to those butterflies of the previous stage which contribute toward its output. The FFT is performed on the indexed data. In one embodiment, a pipelined FFT processor is controlled in a corresponding manner.

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